A NEW COMBINATION IN JUNIPERUS BARBADENSIS L. (CUPRESSACEAE).

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Linneaus (1753) originally recognized two species of Juniperus in the Caribbean. Uncertainty as to the number of native taxa of the genus Juniperus in the Caribbean Islands has existed ever since several new species were proposed in the early 1900's. However, as far as I can determine Linneaus originally had a more accurate understanding of the classification of the Caribbean Junipers than later botanists. It is interesting to note that Dallimore & Jackson (1966) also followed the treatment of Linneaus, recognizing J. barbadensis as native from the Bahamas to Barbados and J. bermudiana from Bermuda. Similarly, Silba (1984) recognized two species in his checklist of the Coniferae.

An increasing number of recent chemotaxonomic studies of the Caribbean Junipers by Adams (1983) has prompted me to take a closer examination of the literature and of type herbarium material. It seems evident that a third taxon of Juniperus is worthy of taxonomic recognition, however only at the varietal level. A new combination is proposed as J. barbadensis var. urbaniana (Pilg. et Ekman) Silba for a taxon present in S.E. Haiti and W. Dominican Republic.

Zanoni (1978) had claimed that the taxonomy of the Caribbean Island Junipers could not be solved on the basis of examination of herbarium material alone. While it is true that herbarium collections of the Caribbean Junipers are poorly represented in most herbaria it is my belief that an examination of type specimens can solve these discrepancies in taxonomy in all but one instance. Since J. saxicola Britt. et Wils. is only represented by juvenile collections which have juvenile leaves and galls instead of true cones only taxonomic conclusions based on its branching pattern can now be drawn. Until adult foliage of J. saxicola is collected from Cuba no definite conclusion can be completely confirmed.

It is odd that neither Zanoni (1978) or Adams (1983) make any statement as to why they do not accept the name J. barbadensis L. for the taxon endemic to the Bahamas, Cuba, Haiti and Jamaica. Instead these authors accept the name J. lucayana Britt. for the taxon distributed most widely in the Caribbean. However, the name J. barbadensis was validly published by Linneaus and takes precedence according to the ICBN. At the same time Adams & Hogge (1983) recognize two other species (J. ekmanii & J. gracilior) from Hispaniola on the basis of chemotaxonomic studies of volatile oils.

I have accepted J. barbadensis L. as the correct name for the taxon present from the Bahamas to Jamaica. This species is charact-

erized by its rounded branchlets and its obtuse leaves with a relatively inactive glandular pit on the dorsal side of the leaf. Herbarium specimens of J. saxicola also have rounded branchlet systems and leaves in similar arrangement of that of J. barbadensis. R.P. Adams had made an annotation on the type specimen of J. saxicola at NY that it is "probably J. barbadensis, needs field work." It is my belief that at most J. saxicola would only be considered as a variety of J. barbadensis if other characteristics besides differences in length of leaves were to be found later. At present J. saxicola is best to be considered as a synonym of J. barbadensis.

An isotype of J. urbaniana (Ekman 3140) at NY differs considerably from typical J. barbadensis in its quadrangular branchlets and its acuminate leaves with an acute to sharply acute apex. An isotype of J. ekmanii (Ekman 3140) at NY also has these features, but it is somewhat smaller in branchlet size and leaf size. These differences in size of branches and leaves may well be due to differences of plants growing in shade or sun. Adams (1983) states other populations from Haiti are similar to J. ekmanii, but since I have not seen these dried herbarium specimens and since photographs look more similar to J. barbadensis I conclude that these N. Haitian populations are conspecific with J. barbadensis.

The type specimen of J. gracilior well agrees with J. barbadensis in its rounded branchlets and obtuse leaves. However, the name has been misapplied to populations of J. urbaniana growing in the W. Dominican Republic. Specimens labeled as J. gracilior as Schrenk 25 (NY) from Arroya La Vora and Allard 16501 (NY) from Constanza, La Vega Province are actually typical of J. urbaniana, in that they have quadrangular branchlets with acuminate leaves with an acute apex.

The taxon I will name as J. barbadensis var. urbaniana actually resembles J. bermudiana. Adams & Hogge (1983) had suggested that the Bermuda Juniper may have evolved by long seed dispersal from the Haitain Juniper (under the name J. ekmanii). Juniperus bermudiana also has quadrangular branchlets, however its leaves grow in sets of four to six and they are much thicker in width than the Haitian Juniper. Also, J. bermudiana has obtuse leaves, its leaf apex is not sharply acute as in J. barbadensis var. urbaniana, neither is its leaf acuminate . These two taxa are also widely separated geographically. It seems more probable that the Haitian Juniper is a variety of the West Indies Juniper on the basis of the similarity in cones and distribution .

JUNIPERUS BARBADENSIS L. "West Indies Juniper"
Sp. Pl. 1039 (1753)= J. lucayana Britt., N. Am. Trees. 121 (1908)= J. saxicola Britt. et Wils., Bull. Torr. Cl. 50: 35 (1923).

As it is presently understood typical J. barbadensis is

recognized as occuring in the Bahamas, Cuba, N. Haiti, W. Dominican Republic and possibly still in Barbados.

JUNIPERUS BARBADENSIS var. URBANIANA (Pilg. et Ekman) Silba, comb.nova
"Haitian Juniper"

Synonymy : J. urbaniana Pilg. et Ekman, Arik. Bot. Stockh. 20a. no.15. 9 (1926)= J.ekmanii Florin, Acta Hort. Gothoburg. 3 (1928).

Juniperus barbadensis var. urbaniana is native to S.E. Haiti and W. Dominican Republic,and is an endangered plant (Adams, under the name J. ekmanii, 1983).

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